

LFV Data Product Specification (Obstacle Dataset AREA1)

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1 DATASET DESCRIPTION

Version:	4.0
Latest version:	N/A
Published:	2025-02-19
Language:	English
Extent of the data product:	Sweden FIR
Topic category:	Transportation
Keywords:	Obstacles, Enroute

Abstract of the data product

This dataset is a full dataset describing the obstacles in Area 1 (Sweden FIR) which has a height of 100 m or more above ground level.

The descriptions and requirements of the Area 1 obstacles can be found in ICAO Annex 15, 16th Edition and PANS-AIM (Doc 10066), 1st Edition as well as in EUROCONTROL TOD Manual, Edition 3.0.

Contact Information

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(1) About the data product specification

Title:	LFV Obstacle Dataset Definition
This version:	4.0
Latest version:	3.0
Published:	2025-02-19
Updated:	2025-02-19
Language:	English
Contact:	Address: LFV Sweden Hospitalsgatan 30, 601 79 Norrköping, Sweden Phone/Fax: +46 11 – 192200 / N/A Email: aip@lfv.se Web site: https://www.aro.lfv.se
Web location:	https://www.aro.lfv.se/Editorial/View/Dataset



Format:	PDF
Maintenance:	This data product specification is reviewed at least once every year, and updated when deemed necessary.
Handling restrictions:	N/A
Terms and definitions:	See ICAO Annex 15, 16 th Edition and PANS-AIM (Doc 10066), 1 st Edition
Abbreviations:	CSV: Comma Separated File xlsx: Excel file format EPSG: European Petroleum Survey Group (standardized code system for reference systems) FIR: Flight Information Region
(2) Identification and purpose of the data product	
Official title:	LFV AREA1 Obstacle Dataset
Alternative title:	N/A
ID:	LFV AREA1 Obstacle Dataset
Abstract:	Dataset for Sweden AREA1 obstacles.
Purpose:	The purpose of the dataset is to provide obstacle data for air navigation purposes. ICAO PANS-AIM, Chapter 5.3.3.2 provides possible uses of the data. It is the responsibility of the users to determine if the data product meets their needs.
Topic category:	Transportation
Keywords:	Obstacles
Spatial representation:	Vector
Spatial resolution:	N/A
Supplemental information:	NIL
Restrictions:	For aviation use only!
Extent:	SWEDEN FIR
(3) Scopes	
Scope id:	General scope
Level:	Series
Level name:	General scope
Level description:	Describes the specifications, which are for obstacles of all underlying scope levels.
Extent:	N/A
Coverage:	N/A
(4) Area 1	
Scope id:	Area 1



Level:	Dataset
Level name:	Area 1
Level description:	The Area 1 scope defines the specifications, which are for obstacle in Area 1 and deviate from the general scope.
Extent:	SWEDEN FIR
Coverage:	Not applicable
(5) Data content and structure	
Area 1 Scope	
Narrative description:	The data model for obstacle data is defined in Annex 1: Attribute list definition
Application schema:	N/A
Feature catalogue:	N/A
(6) Reference system	
General scope	
Spatial reference system:	Horizontal reference system: WGS84, EPSG: 4326 Vertical reference system: Mean Sea Level using RH2000 datum, EPSG: 5613
Temporal reference system:	N/A
(7) Data quality	
General scope	
Data quality element:	Traceability Data quality measure: All actions over the obstacle objects are traced and saved in metadata, which is available on request.
Data quality element:	Timeliness Data quality measure: Timeliness is assured by storing and extracting the storing and/or editing date of all obstacles.
Area 1	
Data quality element:	Assurance (Integrity) Data quality measure: The horizontal and vertical position integrity is classified as "routine". The procedures for processing obstacles have been setup to meet the integrity requirements.
Data quality element:	Horizontal confidence level The horizontal confidence level is 90% for obstacles which has a horizontal accuracy presented. For obstacles that do not, no confidence level can be given.
Data quality element:	Vertical confidence level The horizontal confidence level is 90% for obstacles which has a vertical accuracy value presented. For obstacles that do not, no confidence level can be given.

**(8) Data capture and production****Area 1**

Description:	Obstacles are surveyed by Lantmäteriet and reported to Flyginfo SE. New obstacles are reported by obstacle owners or other originating stakeholders to Flyginfo SE.
Guide:	N/A
Inclusion criteria:	Obstacle must have a minimal height of 100 M above ground level to be included.
Data acquisition and processing:	The data is reported by obstacle owners and/or captured and processed with photogrammetry.

(9) Maintenance of the data**Area 1**

Description:	The obstacle dataset for Area 1 will be updated once every month, following the specified ICAO/Eurocontrol AIRAC dates.
Frequency:	Continual
User defined:	N/A

(10) Portrayal rules**General scope**

Portrayal rules:	N/A
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(11) Data delivery**Area 1**

Format name:	CSV
Format version:	N/A
Format specification:	N/A
File structure:	CSV file, see 1.1 for CSV attribute list Excel-friendly .xlsx file version of data Complementary Changes-document, see 1.3.2 Metadata file, see 1.4.1
Language:	English (Swedish characters used for obstacle names)
Character set:	UTF-8
Units of delivery:	Dataset
Transfer size:	Various but < 2 mb
Medium name:	Online
Other delivery:	N/A
Service property:	File download available at: https://www.aro.lfv.se/Editorial/View/Dataset

(12) Metadata**Area 1**

	Dokumentnummer: D-2023-348273	Sida: 6 (9)
	Datum: 2025-02-19	Version: 4.0
	Informationsklass: Offentlig	
	Rubrik: LFV Data Product Specification (Obstacle Dataset AREA1)	

Specification:	Text-based
Encoding:	N/A
Metadata elements:	<p>The metadata is included in the dataset as described in ICAO Annex 15 Chapter 5.3.2. The following metadata is provided:</p> <ul style="list-style-type: none"> • Title of dataset • Organization providing the dataset • Abstract • Creation date • Effective date • Validity • Constraints of use
(13) Additional information	
General scope	
Additional information:	N/A

1.1 Attribute list definition

Dataset attributes realized in CSV file:

- "OBSTACLE_IDENTIFIER"
- "NAME"
- "HORIZONTAL_ACCURACY"
- "HORIZONTAL_ACCURACY_UOM"
- "LATITUDE"
- "LONGITUDE"
- "LATITUDE_DD"
- "LONGITUDE_DD"
- "HORIZONTAL_RESOLUTION"
- "HORIZONTAL_RESOLUTION_UOM"
- "HORIZONTAL_EXTENT"
- "ELEVATION"
- "ELEVATION_UOM"
- "HEIGHT"
- "HEIGHT_UOM"
- "VERTICAL_ACCURACY"
- "VERTICAL_ACCURACY_UOM"
- "VERTICAL_EXTENT_ACC"
- "VERTICAL_EXTENT_ACC_UOM"
- "VERTICAL_RESOLUTION"
- "VERTICAL_RESOLUTION_UOM"
- "OBSTACLE_TYPE"
- "GEOMETRY_TYPE"
- "INTEGRITY"
- "DATESTAMP"
- "LIGHTING"
- "LIGHTING_CHARACTER"
- "MARKING"
- "STATUS"

	Dokumentnummer: D-2023-348273	Sida: 7 (9)
	Datum: 2025-02-19	Version: 4.0
	Informationsklass: Offentlig	
Rubrik: LFV Data Product Specification (Obstacle Dataset AREA1)		

- REMARKS"

1.2 Example CSV file

Header:

"OBSTACLE_IDENTIFIER";"NAME";"HORIZONTAL_ACCURACY";"HORIZONTAL_ACCURACY_UOM";"LATITUDE";"LONGITUDE";"LATITUDE_DD";"LONGITUDE_DD";"HORIZONTAL_RESOLUTION";"HORIZONTAL_RESOLUTION_UOM";"HORIZONTAL_EXTENT";"ELEVATION";"ELEVATION_UOM";"HEIGHT";"HEIGHT_UOM";"VERTICAL_ACCURACY";"VERTICAL_ACCURACY_UOM";"VERTICAL_EXTENT_ACC";"VERTICAL_EXTENT_ACC_UOM";"VERTICAL_RESOLUTION";"VERTICAL_RESOLUTION_UOM";"OBSTACLE_TYPE";"GEOMETRY_TYPE";"INTEGRITY";"DATESTAMP";"LIGHTING";"LIGHTING_CHARACTER";"MARKING";"STATUS";"REMARKS"

Data row:

"2";"BARSEBÄCK/MALMÖ";"10";"M";"554437.3N";"0125517.0E";"55.74368";"12.92139";"0.3";"Seconds";"";"370";"FT";"361";"FT";"5";"M";"5";"M";"1";"M";"STACK";"POINT";"ROUTINE";"20231116";"Y";"FR";"";"COMPLETED";""

1.3 Change file

1.3.1 Description format, Change file

WEF: 20XXYYZZ

ADDED:

<items added in new dataset file>

CHANGED:

Alt 1: Structural change: Textual description about change

Alt 2: Data change: <changed lines from new dataset file compared to previous dataset file>

REMOVED:

<removed items in new dataset file compare with previous dataset file>

1.3.2 Example, Change file

WEF: 20231005

ADDED:

"17497";"BLÅKÖLEN";"10";"M";"662949.2N";"0213648.5E";"66.49701";"21.61346";"0.3";"Seconds";"";"1558";"FT";"492";"FT";"5";"M";"5";"M";"1";"M";"ANTENNA";"POINT";"ROUTINE";"20241014";"Y";"FR";"";"COMPLETED";""

"17510";"GATEGÅRDEN";"10";"M";"581728.9N";"0130757.9E";"58.29136";"13.13274";"0.3";"Seconds";"";"712";"FT";"456";"FT";"5";"M";"5";"M";"1";"M";"WINDMILL";"POINT";"ROUTINE";"20241115";"UNKNOWN";"unknown";"";"COMPLETED";""

	Dokumentnummer: D-2023-348273	Sida: 8 (9)
	Datum: 2025-02-19	Version: 4.0
	Informationsklass: Offentlig	
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"17514";"LOMMAGÅRDEN";"10";"M";"582302.1N";"0131207.2E";"58.38392";"13.20199";"0.3";"Seconds";"";"575";"FT";"328";"FT";"5";"M";"5";"M";"1";"M";"WINDMILL";"POINT";"ROUTINE";"20241115";"UNKNOWN";"unknown";"";"COMPLETED";""

CHANGED:

11721;ARDALA;10;M;582149.4N;0131523.1E;58.36371;13.25641;0.3;Seconds;;787;FT;492;FT;5;M;5;M;1;M;WINDMILL;POINT;ROUTINE;20140317;Y;FLGR;;COMPLETED;

11722;ARDALA;10;M;582146.2N;0131553.3E;58.36284;13.26481;0.3;Seconds;;787;FT;492;FT;5;M;5;M;1;M;WINDMILL;POINT;ROUTINE;20140317;Y;FLGR;;COMPLETED;


11723;ARDALA;10;M;582152.2N;0131453.0E;58.36451;13.24804;0.3;Seconds;;774;FT;492;FT;5;M;5;M;1;M;WINDMILL;POINT;ROUTINE;20140317;Y;FLGR;;COMPLETED;

REMOVED:

9265;MIDDELGRUND;;;563341.0N;0120616.9E;56.56138;12.1047;;;394;FT;394;FT;;;;;;ANTENNA;POINT;ROUTINE;20160308;Y;FR;;COMPLETED;

10773;KVÄNUM;;;581624.3N;0130802.9E;58.27343;13.13415;;;735;FT;459;FT;;;;;;WINDMILL;POINT;ROUTINE;20120528;Y;FLGR;;COMPLETED;

10767;STRANDFÄBODARNA;10;M;610429.2N;0170200.8E;61.07477;17.03355;0.3;Seconds;;722;FT;492;FT;5;M;5;M;1;M;ANTENNA;POINT;ROUTINE;20120523;Y;FR;;COMPLETED;

	Dokumentnummer: D-2023-348273	Sida: 9 (9)
	Datum: 2025-02-19	Version: 4.0
	Informationsklass: Offentlig	
Rubrik: LFV Data Product Specification (Obstacle Dataset AREA1)		

1.4 Metadata

1.4.1 Metadata description

Title of dataset:

LFV AREA1 Obstacle Dataset

Organization providing the dataset:

LFV, Sweden

Abstract:

This dataset contains Sweden AREA1 (SWEDEN FIR) obstacle data for known obstacles with a height of 328 FT (100 M) or more above ground level. The responsible data provider for all information contained is Flyginfo SE, Sweden.

For information on changes (added, changed or removed obstacles) compared to last dataset file, see Changes file included in the delivery. For detailed information about the dataset, see Dataset Description document D-2023-348273 (<https://www.aro.lfv.se/Editorial/View/Dataset>).

Creation date:

20XX-YY-ZZ

Effective date:

20XX-YY-ZZ

Validity:

Valid from specified Effective date.

Constraints of use:

Air navigation use only!